

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- Claim 1 (Currently Amended):** A method of cementing in a subterranean formation comprising the steps of: providing a cement composition comprising a hydraulic cement, water, and a fluid loss control additive, the fluid loss control additive comprising: an acrylamide copolymer derivative; an ~~inorganic~~ iron compound; and a hydratable polymer; placing the cement composition into the subterranean formation; and permitting the cement composition to set therein.
- Claim 2 (Original):** The method of claim 1 wherein the acrylamide copolymer derivative comprises a copolymer or copolymer salt of N,N-dimethylacrylamide and 2-acrylamido-2-methylpropane sulfonic acid or acid salts thereof.
- Claim 3 (Currently Amended):** A method of cementing in a subterranean formation comprising the steps of: providing a cement composition comprising a hydraulic cement, water, and a fluid loss control additive, the fluid loss control additive comprising: an acrylamide copolymer derivative; an iron compound; and a hydratable polymer; placing the cement composition into the subterranean formation; and permitting the cement composition to set therein; wherein the acrylamide copolymer derivative comprises a graft polymer comprising a backbone comprising at least one member selected from the group consisting of lignin, lignite and their salts and a grafted pendant group comprising at least one member selected from the group consisting of 2-acrylamido-2-methylpropanesulfonic acid, acrylonitrile, N,N-dimethylacrylamide, acrylic acid, N,N-dialkylaminoethylmethacrylate wherein the alkyl radical comprises at least one member selected from the group consisting of methyl, ethyl and propyl radicals.
- Claim 4 (Currently Amended):** A method of cementing in a subterranean formation comprising the steps of: providing a cement composition comprising a hydraulic cement, water, and a fluid loss control additive, the fluid loss control additive comprising: an acrylamide copolymer derivative; an iron compound; and a hydratable polymer; placing

the cement composition into the subterranean formation; and permitting the cement composition to set therein; wherein the acrylamide copolymer derivative comprises a graft polymer comprising a backbone comprising at least one member selected from the group consisting of derivatized cellulose, polyvinyl alcohol, polyethylene oxide, polypropylene oxide, and a grafted pendant group comprising at least one member selected from the group consisting of 2-acrylamido-2-methylpropanesulfonic acid, acrylonitrile, N,N-dimethylacrylamide, acrylic acid, N,N-dialkylaminoethylmethacrylate wherein the alkyl radical comprises at least one member selected from the group consisting of methyl, ethyl and propyl radicals.

Claim 5 (Original): The method of claim 1 wherein the acrylamide copolymer derivative comprises copolymers or copolymer salts comprising 2-acrylamido-2-methylpropane sulfonic acid or acid salts thereof.

Claim 6 (Original): The method of claim 5 wherein the copolymers or copolymer salts comprise copolymers of hydrolyzed acrylamide and 2-acrylamido-2-methylpropane sulfonic acid derivatives.

Claim 7 (Original): The method of claim 1 wherein the hydratable polymer comprises carboxymethylcellulose, hydroxyethylcellulose, carboxymethylhydroxyethylcellulose, vinyl sulfonated polymers, hydratable graft polymers, and mixtures thereof.

Claim 8 (Original): The method of claim 1 wherein the fluid loss control additive further comprises a dispersant.

Claim 9 (Original): The method of claim 8 wherein the dispersant comprises a water-soluble polymer prepared by the caustic-catalyzed condensation of formaldehyde with acetone wherein the polymer contains sodium sulfate groups.

Claim 10 (Currently Amended): A method of cementing in a subterranean formation comprising the steps of: providing a cement composition comprising a hydraulic cement, water, and a fluid loss control additive, the fluid loss control additive comprising: an acrylamide copolymer derivative, a hydratable polymer, an iron compound, and a zeolite; placing the cement composition into the subterranean formation; and permitting the cement composition to set therein.

Claim 11 (Previously Presented): The method of claim 10 wherein the fluid loss control additive further comprises a dispersant.

- Claim 12 (Previously Presented):** The method of claim 11 wherein the fluid loss control additive comprises iron chloride, an organic acid, a deaggregation agent, silica, or mixtures thereof.
- Claim 13 (Original):** The method of claim 1 wherein the cement comprises Portland cements, pozzolanic cements, gypsum cements, high alumina content cements, silica cements, or high alkalinity cements.
- Claim 14 (Original):** The method of claim 1 wherein the water is present in the cement composition in an amount sufficient to form a pumpable slurry.
- Claim 15 (Original):** The method of claim 1 wherein the water is present in the cement composition in an amount in the range of from about 15% to about 200% by weight of cement.
- Claim 16 (Original):** The method of claim 1 wherein the cement composition has a density in the range of from about 5 pounds per gallon to about 30 pounds per gallon.
- Claim 17 (Original):** The method of claim 1 wherein the cement composition further comprises a weighting agent, a defoamer, a surfactant, mica, fiber, bentonite, microspheres, fumed silica, a salt, vitrified shale, fly ash, a dispersant, a retardant or an accelerant.
- Claim 18 (Original):** The method of claim 1 wherein the fluid loss control additive is present in the cement composition in an amount sufficient to provide a desired degree of fluid loss control.
- Claim 19 (Original):** The method of claim 1 wherein the fluid loss control additive is present in the cement composition in an amount in the range of from about 0.01% by weight of cement to about 5.0% by weight of cement.
- Claim 20 (Original):** The method of claim 12 wherein the iron chloride is present in the fluid loss control additive in an amount sufficient to allow the cement to be suitable for the subterranean temperature of the well being cemented.
- Claim 21 (Original):** The method of claim 12 wherein the iron chloride is present in the fluid loss control additive in an amount in the range of from about 5% to about 25% by weight of the fluid loss control additive.
- Claim 22 (Original):** The method of claim 12 wherein the iron chloride is anhydrous ferric chloride.

- Claim 23 (Original):** The method of claim 8 wherein the dispersant is present in the fluid loss control additive in an amount sufficient to prevent gelation of the cement composition.
- Claim 24 (Original):** The method of claim 8 wherein the dispersant is present in the fluid loss control additive in an amount in the range of from about 25% to about 50% by weight of the fluid loss control additive.
- Claim 25 (Original):** The method of claim 1 wherein the hydratable polymer is present in the fluid loss control additive in an amount in the range of from about 0.1% to about 15% by weight of the fluid loss control additive.
- Claim 26 (Original):** The method of claim 12 wherein the organic acid is present in the fluid loss control additive in an amount sufficient to provide a desired degree of viscosity control.
- Claim 27 (Original):** The method of claim 12 wherein the organic acid is present in the fluid loss control additive in an amount in the range of from about 0.01% to about 5% by weight of the fluid loss control additive.
- Claim 28 (Original):** The method of claim 12 wherein the silica is high surface area amorphous silica.
- Claim 29 (Original):** The method of claim 12 wherein the de-aggregation agent is present in the fluid loss control additive in an amount sufficient to enable the fluid loss control additive to flow freely as a powder.
- Claim 30 (Original):** The method of claim 29 wherein the de-aggregation agent is present in the fluid loss control additive in an amount in the range of from about 1% to about 15% by weight of the fluid loss control additive.
- Claim 31 (Original):** The method of claim 28 wherein the high surface area amorphous silica is present in the fluid loss control additive in an amount sufficient to provide a desired after-set compressive strength.
- Claim 32 (Original):** The method of claim 28 wherein the high surface area amorphous silica is present in the fluid loss control additive in an amount in the range of from about 0.1% to about 15% by weight of the fluid loss control additive.
- Claim 33 (Original):** The method of claim 1 wherein the acrylamide copolymer derivative is present in the fluid loss control additive in an amount in the range of from about 1% to about 99% by weight.

- Claim 34 (Original):** The method of claim 2 wherein the copolymer or copolymer salt has a N,N-dimethylacrylamide to 2-acrylamido-2-methylpropane sulfonic acid (or acid salts thereof) mole ratio of from about 1:4 to about 4:1.
- Claim 35 (Original):** The method of claim 2 wherein the copolymer or copolymer salt has a weight average molecular weight of between about 75,000 and about 300,000 daltons.
- Claim 36 (Original):** The method of claim 10 wherein the zeolite further comprises chabazite and amorphous silica.
- Claim 37 (Original):** The method of claim 10 wherein the zeolite is present in the fluid loss control additive in an amount in the range of from about 0.1% to about 15% by weight of the fluid loss control additive.
- Claim 38 (Currently Amended):** The method of claim 11 wherein the fluid loss control additive is present in the cement composition in an amount in the range of from about 0.25% to about 1.5% by weight of the cement; wherein the hydratable polymer is present in the fluid loss control additive in an amount in the range of from about 1.5% to about 4.5% by weight; wherein the acrylamide copolymer derivative is present in the fluid loss control additive in an amount in the range of from about 40% by weight to about 50% by weight; wherein the ~~dispersing agent~~ dispersant is present in the fluid loss control additive in an amount in the range of from about 40% to about 60% by weight; wherein the zeolite is present in the fluid loss control additive in an amount in the range of from about 1% by weight to about 10% by weight.
- Claim 39 (Currently Amended):** A method of cementing in a subterranean formation comprising the steps of:
- providing a cement composition comprising a hydraulic cement, water, and a fluid loss control additive, the fluid loss control additive comprising: an acrylamide copolymer derivative; an iron ~~inorganic~~ compound; and a dispersant;
 - placing the cement composition into the subterranean formation; and
 - permitting the cement composition to set therein.
- Claim 40 (Original):** The method of claim 39 wherein the acrylamide copolymer derivative comprises a copolymer or copolymer salt of N,N-dimethylacrylamide and 2-acrylamido-2-methylpropane sulfonic acid or acid salts thereof.

Claim 41 (Currently Amended): A method of cementing in a subterranean formation comprising the steps of: providing a cement composition comprising a hydraulic cement, water, and a fluid loss control additive, the fluid loss control additive comprising: an acrylamide copolymer derivative; an iron compound; and a dispersant; placing the cement composition into the subterranean formation; and permitting the cement composition to set therein; wherein the acrylamide copolymer derivative comprises a graft polymer comprising a backbone comprising at least one member selected from the group consisting of lignin, lignite and their salts and a grafted pendant group comprising at least one member selected from the group consisting of 2-acrylamido-2-methylpropanesulfonic acid, acrylonitrile, N,N-dimethylacrylamide, acrylic acid, N,N-dialkylaminoethylmethacrylate wherein the alkyl radical comprises at least one member selected from the group consisting of methyl, ethyl and propyl radicals.

Claim 42 (Currently Amended): A method of cementing in a subterranean formation comprising the steps of: providing a cement composition comprising a hydraulic cement, water, and a fluid loss control additive, the fluid loss control additive comprising: an acrylamide copolymer derivative; an iron compound; and a dispersant; placing the cement composition into the subterranean formation; and permitting the cement composition to set therein; wherein the acrylamide copolymer derivative comprises a graft polymer comprising a backbone comprising at least one member selected from the group consisting of derivatized cellulose, polyvinyl alcohol, polyethylene oxide, polypropylene oxide, and a grafted pendant group comprising at least one member selected from the group consisting of 2-acrylamido-2-methylpropanesulfonic acid, acrylonitrile, N,N-dimethylacrylamide, acrylic acid, N,N-dialkylaminoethylmethacrylate wherein the alkyl radical comprises at least one member selected from the group consisting of methyl, ethyl and propyl radicals.

Claim 43 (Original): The method of claim 39 wherein the acrylamide copolymer derivative comprises copolymers or copolymer salts comprising 2-acrylamido-2-methylpropane sulfonic acid or acid salts thereof.

Claim 44 (Original): The method of claim 43 wherein the copolymers or copolymer salts comprise copolymers of hydrolyzed acrylamide and 2-acrylamido-2-methylpropane sulfonic acid derivatives.

Claim 45 (Currently Amended): A method of cementing in a subterranean formation comprising the steps of: providing a cement composition comprising a hydraulic cement, water, and a fluid loss control additive, the fluid loss control additive comprising: an acrylamide copolymer derivative, an iron compound, a hydratable polymer, a zeolite, and a dispersant; placing the cement composition into the subterranean formation; and permitting the cement composition to set therein.

Claim 46 (Currently Amended): A method of reducing the fluid loss from a cement composition, comprising the step of adding to the cement composition a fluid loss control additive comprising: an acrylamide copolymer derivative; an iron inorganic compound; and a hydratable polymer.

Claim 47 (Original): The method of claim 46 wherein the acrylamide copolymer derivative comprises a copolymer or copolymer salt of N,N-dimethylacrylamide and 2-acrylamido-2-methylpropane sulfonic acid or acid salts thereof.

Claim 48 (Currently Amended): A method of reducing the fluid loss from a cement composition, comprising the step of adding to the cement composition a fluid loss control additive comprising: an acrylamide copolymer derivative; an iron compound; and a hydratable polymer; wherein the acrylamide copolymer derivative comprises a graft polymer comprising a backbone comprising at least one member selected from the group consisting of lignin, lignite and their salts and a grafted pendant group comprising at least one member selected from the group consisting of 2-acrylamido-2-methylpropanesulfonic acid, acrylonitrile, N,N-dimethylacrylamide, acrylic acid, N,N-dialkylaminoethylmethacrylate wherein the alkyl radical comprises at least one member selected from the group consisting of methyl, ethyl and propyl radicals.

Claim 49 (Currently Amended): A method of reducing the fluid loss from a cement composition, comprising the step of adding to the cement composition a fluid loss control additive comprising: an acrylamide copolymer derivative; an iron compound; and a hydratable polymer; wherein the acrylamide copolymer derivative comprises a graft polymer comprising a backbone comprising at least one member selected from the group consisting of derivatized cellulose, polyvinyl alcohol, polyethylene oxide, polypropylene oxide, and a grafted pendant group comprising at least one member selected from the group consisting of 2-acrylamido-2-methylpropanesulfonic acid, acrylonitrile, N,N-

dimethylacrylamide, acrylic acid, N,N-dialkylaminoethylmethacrylate wherein the alkyl radical comprises at least one member selected from the group consisting of methyl, ethyl and propyl radicals.

Claim 50 (Original): The method of claim 46 wherein the acrylamide copolymer derivative comprises copolymers or copolymer salts comprising 2-acrylamido-2-methylpropane sulfonic acid or acid salts thereof.

Claim 51 (Original): The method of claim 50 wherein the copolymers or copolymer salts comprise copolymers of hydrolyzed acrylamide and 2-acrylamido-2-methylpropane sulfonic acid derivatives.

Claim 52 (Original): The method of claim 46 wherein the hydratable polymer comprises carboxymethylcellulose, hydroxyethylcellulose, carboxymethylhydroxyethylcellulose, vinyl sulfonated polymers, hydratable graft polymers, and mixtures thereof.

Claim 53 (Original): The method of claim 46 wherein the fluid loss control additive further comprises a dispersant.

Claim 54 (Original): The method of claim 53 wherein the dispersant comprises a water-soluble polymer prepared by the caustic-catalyzed condensation of formaldehyde with acetone wherein the polymer contains sodium sulfate groups.

Claim 55 (Currently Amended): A method of reducing the fluid loss from a cement composition, comprising the step of adding to the cement composition a fluid loss control additive comprising: an acrylamide copolymer derivative; an iron compound; a zeolite; and a hydratable polymer.

Claim 56 (Previously Presented): The method of claim 55 wherein the fluid loss control additive further comprises a dispersant.

Claim 57 (Currently Amended): The method of claim 56 wherein the fluid loss control additive ~~further~~ comprises iron chloride, an organic acid, a deaggregation agent, silica, or mixtures thereof.

Claim 58 (Original): The method of claim 46 wherein the cement composition comprises Portland cements, pozzolanic cements, gypsum cements, high alumina content cements, silica cements, or high alkalinity cements.

Claim 59 (Original): The method of claim 46 wherein the cement composition comprises water present in an amount sufficient to form a pumpable slurry.

Claim 60 (Original): The method of claim 59 wherein the water is present in the cement composition in an amount in the range of from about 15% by weight of cement to about 200% by weight of cement.

Claim 61 (Original): The method of claim 46 wherein the cement composition has a density in the range of from about 5 pounds per gallon to about 30 pounds per gallon.

Claim 62 (Original): The method of claim 46 wherein the cement composition further comprises a weighting agent, a defoamer, a surfactant, mica, fiber, bentonite, microspheres, fumed silica, a salt, vitrified shale, fly ash, a dispersant, a retardant or an accelerant.

Claim 63 (Original): The method of claim 46 wherein the fluid loss control additive is present in the cement composition in an amount sufficient to provide a desired degree of fluid loss control.

Claim 64 (Original): The method of claim 46 wherein the fluid loss control additive is present in the cement composition in an amount in the range of from about 0.01% by weight of cement to about 5.0% by weight of cement.

Claim 65 (Original): The method of claim 57 wherein the iron chloride is present in the fluid loss control additive in an amount sufficient to allow the cement to be suitable for the subterranean temperature of the well being cemented.

Claim 66 (Original): The method of claim 57 wherein the iron chloride is present in the fluid loss control additive in an amount in the range of from about 5% to about 25% by weight of the fluid loss control additive.

Claim 67 (Original): The method of claim 57 wherein the iron chloride is anhydrous ferric chloride.

Claim 68 (Original): The method of claim 53 wherein the dispersant is present in the fluid loss control additive in an amount sufficient to prevent gelation of the cement composition.

Claim 69 (Original): The method of claim 53 wherein the dispersant is present in the fluid loss control additive in an amount in the range of from about 25% to about 50% by weight of the fluid loss control additive.

Claim 70 (Original): The method of claim 46 wherein the hydratable polymer is present in the fluid loss control additive in an amount in the range of from about 0.1% to about 15% by weight of the fluid loss control additive.

- Claim 71 (Original):** The method of claim 57 wherein the organic acid is present in the fluid loss control additive in an amount sufficient to provide a desired degree of viscosity control.
- Claim 72 (Original):** The method of claim 57 wherein the organic acid is present in the fluid loss control additive in an amount in the range of from about 0.01% to about 5% by weight of the fluid loss control additive.
- Claim 73 (Original):** The method of claim 57 wherein the silica is high surface area amorphous silica.
- Claim 74 (Original):** The method of claim 57 wherein the de-aggregation agent is present in the fluid loss control additive in an amount sufficient to enable the fluid loss control additive to flow freely as a powder.
- Claim 75 (Original):** The method of claim 57 wherein the de-aggregation agent is present in the fluid loss control additive in an amount in the range of from about 1% to about 15% by weight of the fluid loss control additive.
- Claim 76 (Original):** The method of claim 73 wherein the high surface area amorphous silica is present in the fluid loss control additive in an amount sufficient to provide a desired after-set compressive strength.
- Claim 77 (Original):** The method of claim 73 wherein the high surface area amorphous silica is present in the fluid loss control additive in an amount in the range of from about 0.1% to about 15% by weight of the fluid loss control additive.
- Claim 78 (Original):** The method of claim 46 wherein the acrylamide copolymer derivative is present in the fluid loss control additive in an amount in the range of from about 1% to about 99% by weight.
- Claim 79 (Original):** The method of claim 47 wherein the copolymer or copolymer salt has a N,N-dimethylacrylamide to 2-acrylamido-2-methylpropane sulfonic acid (or acid salts thereof) mole ratio of from about 1:4 to about 4:1.
- Claim 80 (Original):** The method of claim 47 wherein the copolymer or copolymer salt has a weight average molecular weight of between about 75,000 and about 300,000 daltons.
- Claim 81 (Original):** The method of claim 55 wherein the zeolite further comprises chabazite and amorphous silica.

Claim 82 (Original): The method of claim 55 wherein the zeolite is present in the fluid loss control additive in an amount in the range of from about 0.1% to about 15% by weight.

Claim 83 (Currently Amended): The method of claim 56 wherein the fluid loss control additive is present in the cement composition in an amount in the range of from about 0.25% to about 1.5% by weight of the cement; wherein the hydratable polymer is present in the fluid loss control additive in an amount in the range of from about 1.5% to about 4.5% by weight; wherein the acrylamide copolymer derivative is present in the fluid loss control additive in an amount in the range of from about 40% by weight to about 50% by weight; wherein the ~~dispersing agent~~ dispersant is present in the fluid loss control additive in an amount in the range of from about 40% to about 60% by weight; and wherein the zeolite is present in the fluid loss control additive in an amount in the range of from about 1% by weight to about 10% by weight.

Claim 84 (Currently Amended): A method of reducing the fluid loss from a cement composition, comprising the step of adding to the cement composition a fluid loss control additive comprising: an acrylamide copolymer derivative; an iron ~~inorganic~~ compound; and a dispersant.

Claim 85 (Original): The method of claim 84 wherein the acrylamide copolymer derivative comprises a copolymer or copolymer salt of N,N-dimethylacrylamide and 2-acrylamido-2-methylpropane sulfonic acid or acid salts thereof.

Claim 86 (Currently Amended): A method of reducing the fluid loss from a cement composition, comprising the step of adding to the cement composition a fluid loss control additive comprising: an acrylamide copolymer derivative; an iron compound; and a dispersant; wherein the acrylamide copolymer derivative comprises a graft polymer comprising a backbone comprising at least one member selected from the group consisting of lignin, lignite and their salts and a grafted pendant group comprising at least one member selected from the group consisting of 2-acrylamido-2-methylpropanesulfonic acid, acrylonitrile, N,N-dimethylacrylamide, acrylic acid, N,N-dialkylaminoethylmethacrylate wherein the alkyl radical comprises at least one member selected from the group consisting of methyl, ethyl and propyl radicals.

Claim 87 (Currently Amended): A method of reducing the fluid loss from a cement composition, comprising the step of adding to the cement composition a fluid loss control

additive comprising: an acrylamide copolymer derivative; an iron compound; and a dispersant; wherein the acrylamide copolymer derivative comprises a graft polymer comprising a backbone comprising at least one member selected from the group consisting of derivatized cellulose, polyvinyl alcohol, polyethylene oxide, polypropylene oxide, and a grafted pendant group comprising at least one member selected from the group consisting of 2-acrylamido-2-methylpropanesulfonic acid, acrylonitrile, N,N-dimethylacrylamide, acrylic acid, N,N-dialkylaminoethylmethacrylate wherein the alkyl radical comprises at least one member selected from the group consisting of methyl, ethyl and propyl radicals.

Claim 88 (Original): The method of claim 84 wherein the acrylamide copolymer derivative comprises copolymers or copolymer salts comprising 2-acrylamido-2-methylpropane sulfonic acid or acid salts thereof.

Claim 89 (Original): The method of claim 88 wherein the copolymers or copolymer salts comprise copolymers of hydrolyzed acrylamide and 2-acrylamido-2-methylpropane sulfonic acid derivatives.

Claim 90 (Currently Amended): A method of reducing the fluid loss from a cement composition, comprising the step of adding to the cement composition a fluid loss control additive comprising: an acrylamide copolymer derivative; an iron compound; a hydratable polymer; a zeolite; and a dispersant.

Claim 91 (Withdrawn): A cement composition comprising a hydraulic cement, water, and a fluid loss control additive, the fluid loss control additive comprising: an acrylamide copolymer derivative; and a hydratable polymer.

Claim 92 (Withdrawn): The cement composition of claim 91 wherein the acrylamide copolymer derivative comprises a copolymer or copolymer salt of N,N-dimethylacrylamide and 2-acrylamido-2-methylpropane sulfonic acid or acid salts thereof.

Claim 93 (Withdrawn): The cement composition of claim 91 wherein the acrylamide copolymer derivative comprises a graft polymer comprising a backbone comprising at least one member selected from the group consisting of lignin, lignite and their salts and a grafted pendant group comprising at least one member selected from the group consisting of 2-acrylamido-2-methylpropanesulfonic acid, acrylonitrile, N,N-dimethylacrylamide,

acrylic acid, N,N-dialkylaminoethylmethacrylate wherein the alkyl radical comprises at least one member selected from the group consisting of methyl, ethyl and propyl radicals.

Claim 94 (Withdrawn): The cement composition of claim 91 wherein the acrylamide copolymer derivative comprises a graft polymer comprising a backbone comprising at least one member selected from the group consisting of derivatized cellulose, polyvinyl alcohol, polyethylene oxide, polypropylene oxide, and a grafted pendant group comprising at least one member selected from the group consisting of 2-acrylamido-2-methylpropanesulfonic acid, acrylonitrile, N,N-dimethylacrylamide, acrylic acid, N,N-dialkylaminoethylmethacrylate wherein the alkyl radical comprises at least one member selected from the group consisting of methyl, ethyl and propyl radicals.

Claim 95 (Withdrawn): The cement composition of claim 91 wherein the acrylamide copolymer derivative comprises copolymers or copolymer salts comprising 2-acrylamido-2-methylpropane sulfonic acid or acid salts thereof.

Claim 96 (Withdrawn): The cement composition of claim 95 wherein the copolymers or copolymer salts comprise copolymers of hydrolyzed acrylamide and 2-acrylamido-2-methylpropane sulfonic acid derivatives.

Claim 97 (Withdrawn): The cement composition of claim 91 wherein the hydratable polymer comprises carboxymethylcellulose, hydroxyethylcellulose, carboxymethylhydroxyethylcellulose, vinyl sulfonated polymers, hydratable graft polymers, and mixtures thereof.

Claim 98 (Withdrawn): The cement composition of claim 91 wherein the fluid loss control additive further comprises a dispersant.

Claim 99 (Withdrawn): The cement composition of claim 98 wherein the dispersant comprises a water-soluble polymer prepared by the caustic-catalyzed condensation of formaldehyde with acetone wherein the polymer contains sodium sulfate groups.

Claim 100 (Withdrawn): The cement composition of claim 91 wherein the fluid loss control additive further comprises a zeolite.

Claim 101 (Withdrawn): The cement composition of claim 91 wherein the fluid loss control additive further comprises a dispersant and a zeolite.

- Claim 102 (Withdrawn):** The cement composition of claim 101 wherein the fluid loss control additive further comprises iron chloride, an organic acid, a deaggregation agent, silica, or mixtures thereof.
- Claim 103 (Withdrawn):** The cement composition of claim 91 wherein the hydraulic cement comprises Portland cements, pozzolanic cements, gypsum cements, high alumina content cements, silica cements, or high alkalinity cements.
- Claim 104 (Withdrawn):** The cement composition of claim 91 wherein the water is present in the cement composition in an amount sufficient to form a pumpable slurry.
- Claim 105 (Withdrawn):** The cement composition of claim 91 wherein the water is present in the cement composition in an amount in the range of from about 15% by weight of cement to about 200% by weight of cement.
- Claim 106 (Withdrawn):** The cement composition of claim 91 wherein the cement composition has a density in the range of from about 5 pounds per gallon to about 30 pounds per gallon.
- Claim 107 (Withdrawn):** The cement composition of claim 91 wherein the cement composition further comprises a weighting agent, a defoamer, a surfactant, mica, fiber, bentonite, microspheres, fumed silica, a salt, vitrified shale, fly ash, a dispersant, a retardant or an accelerant.
- Claim 108 (Withdrawn):** The cement composition of claim 91 wherein the fluid loss control additive is present in the cement composition in an amount sufficient to provide a desired degree of fluid loss control.
- Claim 109 (Withdrawn):** The cement composition of claim 91 wherein the fluid loss control additive is present in the cement composition in an amount in the range of from about 0.01% by weight of cement to about 5.0% by weight of cement.
- Claim 110 (Withdrawn):** The cement composition of claim 102 wherein the iron chloride is present in the fluid loss control additive in an amount sufficient to allow the cement to be suitable for the subterranean temperature of the well being cemented.
- Claim 111 (Withdrawn):** The cement composition of claim 102 wherein the iron chloride is present in the fluid loss control additive in an amount in the range of from about 5% to about 25% by weight of the fluid loss control additive.

- Claim 112 (Withdrawn):** The cement composition of claim 102 wherein the iron chloride is anhydrous ferric chloride.
- Claim 113 (Withdrawn):** The cement composition of claim 98 wherein the dispersant is present in the fluid loss control additive in an amount sufficient to prevent gelation of the cement composition.
- Claim 114 (Withdrawn):** The cement composition of claim 98 wherein the dispersant is present in the fluid loss control additive in an amount in the range of from about 25% to about 50% by weight of the fluid loss control additive.
- Claim 115 (Withdrawn):** The cement composition of claim 91 wherein the hydratable polymer is present in the fluid loss control additive in an amount in the range of from about 0.1% to about 15% by weight of the fluid loss control additive.
- Claim 116 (Withdrawn):** The cement composition of claim 102 wherein the organic acid is present in the fluid loss control additive in an amount sufficient to provide a desired degree of viscosity control.
- Claim 117 (Withdrawn):** The cement composition of claim 102 wherein the organic acid is present in the fluid loss control additive in an amount in the range of from about 0.01% to about 5% by weight of the fluid loss control additive.
- Claim 118 (Withdrawn):** The cement composition of claim 102 wherein the silica is high surface area amorphous silica.
- Claim 119 (Withdrawn):** The cement composition of claim 102 wherein the de-aggregation agent is present in the fluid loss control additive in an amount sufficient to enable the fluid loss control additive to flow freely as a powder.
- Claim 120 (Withdrawn):** The cement composition of claim 102 wherein the de-aggregation agent is present in the fluid loss control additive in an amount in the range of from about 1% to about 15% by weight of the fluid loss control additive.
- Claim 121 (Withdrawn):** The cement composition of claim 118 wherein the high surface area amorphous silica is present in the fluid loss control additive in an amount sufficient to provide a desired after-set compressive strength.
- Claim 122 (Withdrawn):** The cement composition of claim 118 wherein the high surface area amorphous silica is present in the fluid loss control additive in an amount in the range of from about 0.1% to about 15% by weight of the fluid loss control additive.

- Claim 123 (Withdrawn):** The cement composition of claim 91 wherein the acrylamide copolymer derivative is present in the fluid loss control additive in an amount in the range of from about 1% to about 99% by weight.
- Claim 124 (Withdrawn):** The cement composition of claim 92 wherein the copolymer or copolymer salt has a N,N-dimethylacrylamide to 2-acrylamido-2-methylpropane sulfonic acid (or acid salts thereof) mole ratio of from about 1:4 to about 4:1.
- Claim 125 (Withdrawn):** The cement composition of claim 92 wherein the copolymer or copolymer salt has a weight average molecular weight of between about 75,000 and about 300,000 daltons.
- Claim 126 (Withdrawn):** The cement composition of claim 100 wherein the zeolite further comprises chabazite and amorphous silica.
- Claim 127 (Withdrawn):** The cement composition of claim 100 wherein the zeolite is present in the fluid loss control additive in an amount in the range of from about 0.1% to about 15% by weight of the fluid loss control additive.
- Claim 128 (Withdrawn):** The cement composition of claim 91 wherein the fluid loss control additive is present in the cement composition in an amount in the range of from about 0.25% to about 1.5% by weight of the cement; wherein the hydratable polymer is present in the fluid loss control additive in an amount in the range of from about 1.5% to about 4.5% by weight; wherein the acrylamide copolymer derivative is present in the fluid loss control additive in an amount in the range of from about 40% by weight to about 50% by weight; wherein the dispersing agent is present in the fluid loss control additive in an amount in the range of from about in the range of from about 40% to about 60% by weight; wherein the zeolite is present in the fluid loss control additive in an amount in the range of from about 1% by weight to about 10% by weight.
- Claim 129 (Withdrawn):** A cement composition comprising a hydraulic cement, water, and a fluid loss control additive, the fluid loss control additive comprising: an acrylamide copolymer derivative; and a dispersant.
- Claim 130 (Withdrawn):** The cement composition of claim 129 wherein the acrylamide copolymer derivative comprises a copolymer or copolymer salt of N,N-dimethylacrylamide and 2-acrylamido-2-methylpropane sulfonic acid or acid salts thereof.

- Claim 131 (Withdrawn):** The cement composition of claim 129 wherein the acrylamide copolymer derivative comprises a graft polymer comprising a backbone comprising at least one member selected from the group consisting of lignin, lignite and their salts and a grafted pendant group comprising at least one member selected from the group consisting of 2-acrylamido-2-methylpropanesulfonic acid, acrylonitrile, N,N-dimethylacrylamide, acrylic acid, N,N-dialkylaminoethylmethacrylate wherein the alkyl radical comprises at least one member selected from the group consisting of methyl, ethyl and propyl radicals.
- Claim 132 (Withdrawn):** The cement composition of claim 129 wherein the acrylamide copolymer derivative comprises a graft polymer comprising a backbone comprising at least one member selected from the group consisting of derivatized cellulose, polyvinyl alcohol, polyethylene oxide, polypropylene oxide, and a grafted pendant group comprising at least one member selected from the group consisting of 2-acrylamido-2-methylpropanesulfonic acid, acrylonitrile, N,N-dimethylacrylamide, acrylic acid, N,N-dialkylaminoethylmethacrylate wherein the alkyl radical comprises at least one member selected from the group consisting of methyl, ethyl and propyl radicals.
- Claim 133 (Withdrawn):** The cement composition of claim 129 wherein the acrylamide copolymer derivative comprises copolymers or copolymer salts comprising 2-acrylamido-2-methylpropane sulfonic acid or acid salts thereof.
- Claim 134 (Withdrawn):** The cement composition of claim 133 wherein the copolymers or copolymer salts comprise copolymers of hydrolyzed acrylamide and 2-acrylamido-2-methylpropane sulfonic acid derivatives.
- Claim 135 (Withdrawn):** The cement composition of claim 129 wherein the fluid loss control additive further comprises a hydratable polymer and zeolite.
- Claim 136 (Withdrawn):** A fluid loss control additive comprising: an acrylamide copolymer derivative; and a hydratable polymer.
- Claim 137 (Withdrawn):** The fluid loss control additive of claim 136 wherein the acrylamide copolymer derivative comprises a copolymer or copolymer salt of N,N-dimethylacrylamide and 2-acrylamido-2-methylpropane sulfonic acid or acid salts thereof.
- Claim 138 (Withdrawn):** The fluid loss control additive of claim 136 wherein the acrylamide copolymer derivative comprises a graft polymer comprising a backbone comprising at

least one member selected from the group consisting of lignin, lignite and their salts and a grafted pendant group comprising at least one member selected from the group consisting of 2-acrylamido-2-methylpropanesulfonic acid, acrylonitrile, N,N-dimethylacrylamide, acrylic acid, N,N-dialkylaminoethylmethacrylate wherein the alkyl radical comprises at least one member selected from the group consisting of methyl, ethyl and propyl radicals.

Claim 139 (Withdrawn): The fluid loss control additive of claim 136 wherein the acrylamide copolymer derivative comprises a graft polymer comprising a backbone comprising at least one member selected from the group consisting of derivatized cellulose, polyvinyl alcohol, polyethylene oxide, polypropylene oxide, and a grafted pendant group comprising at least one member selected from the group consisting of 2-acrylamido-2-methylpropanesulfonic acid, acrylonitrile, N,N-dimethylacrylamide, acrylic acid, N,N-dialkylaminoethylmethacrylate wherein the alkyl radical comprises at least one member selected from the group consisting of methyl, ethyl and propyl radicals.

Claim 140 (Withdrawn): The fluid loss control additive of claim 136 wherein the acrylamide copolymer derivative comprises copolymers or copolymer salts comprising 2-acrylamido-2-methylpropane sulfonic acid or acid salts thereof.

Claim 141 (Withdrawn): The fluid loss control additive of claim 140 wherein the copolymers or copolymer salts comprise copolymers of hydrolyzed acrylamide and 2-acrylamido-2-methylpropane sulfonic acid derivatives.

Claim 142 (Withdrawn): The fluid loss control additive of claim 136 wherein the hydratable polymer comprises carboxymethylcellulose, hydroxyethylcellulose, carboxymethylhydroxyethylcellulose, vinyl sulfonated polymers, hydratable graft polymers, and mixtures thereof.

Claim 143 (Withdrawn): The fluid loss control additive of claim 136 further comprising a dispersant.

Claim 144 (Withdrawn): The fluid loss control additive of claim 143 wherein the dispersant comprises a water-soluble polymer prepared by the caustic-catalyzed condensation of formaldehyde with acetone wherein the polymer contains sodium sulfate groups.

Claim 145 (Withdrawn): The fluid loss control additive of claim 136 further comprising a zeolite.

- Claim 146 (Withdrawn):** The fluid loss control additive of claim 136 further comprising a dispersant and a zeolite.
- Claim 147 (Withdrawn):** The fluid loss control additive of claim 146 further comprising iron chloride, an organic acid, a deaggregation agent, silica, or mixtures thereof.
- Claim 148 (Withdrawn):** The fluid loss control additive of claim 147 wherein the iron chloride is present in an amount sufficient to allow a cement composition to be suitable for the subterranean temperature of the well being cemented.
- Claim 149 (Withdrawn):** The fluid loss control additive of claim 147 wherein the iron chloride is present in an amount in the range of from about 5% to about 25% by weight of the fluid loss control additive.
- Claim 150 (Withdrawn):** The fluid loss control additive of claim 147 wherein the iron chloride is anhydrous ferric chloride.
- Claim 151 (Withdrawn):** The fluid loss control additive of claim 143 wherein the dispersant is present in an amount sufficient to prevent gelation of a cement composition.
- Claim 152 (Withdrawn):** The fluid loss control additive of claim 143 wherein the dispersant is present in an amount in the range of from about 25% to about 50% by weight of the fluid loss control additive.
- Claim 153 (Withdrawn):** The fluid loss control additive of claim 136 wherein the hydratable polymer is present in an amount in the range of from about 0.1% to about 15% by weight of the fluid loss control additive.
- Claim 154 (Withdrawn):** The fluid loss control additive of claim 147 wherein the organic acid is present in an amount sufficient to provide a desired degree of viscosity control.
- Claim 155 (Withdrawn):** The fluid loss control additive of claim 147 wherein the organic acid is present in an amount in the range of from about 0.01% to about 5% by weight of the fluid loss control additive.
- Claim 156 (Withdrawn):** The fluid loss control additive of claim 147 wherein the silica is high surface area amorphous silica.
- Claim 157 (Withdrawn):** The fluid loss control additive of claim 147 wherein the de-aggregation agent is present in an amount sufficient to enable the fluid loss control additive to flow freely as a powder.

- Claim 158 (Withdrawn):** The fluid loss control additive of claim 147 wherein the de-aggregation agent is present in an amount in the range of from about 1% to about 15% by weight of the fluid loss control additive.
- Claim 159 (Withdrawn):** The fluid loss control additive of claim 156 wherein the high surface area amorphous silica is present in an amount sufficient to provide a desired after-set compressive strength.
- Claim 160 (Withdrawn):** The fluid loss control additive of claim 156 wherein the high surface area amorphous silica is present in an amount in the range of from about 0.1% to about 15% by weight of the fluid loss control additive.
- Claim 161 (Withdrawn):** The fluid loss control additive of claim 136 wherein the acrylamide copolymer derivative is present in an amount in the range of from about 1% to about 99% by weight.
- Claim 162 (Withdrawn):** The fluid loss control additive of claim 137 wherein the copolymer or copolymer salt has a N,N-dimethylacrylamide to 2-acrylamido-2-methylpropane sulfonic acid (or acid salts thereof) mole ratio of from about 1:4 to about 4:1.
- Claim 163 (Withdrawn):** The fluid loss control additive of claim 137 wherein the copolymer or copolymer salt has a weight average molecular weight of between about 75,000 and about 300,000 daltons.
- Claim 164 (Withdrawn):** The fluid loss control additive of claim 145 wherein the zeolite further comprises chabazite and amorphous silica.
- Claim 165 (Withdrawn):** The fluid loss control additive of claim 145 wherein the zeolite is present in an amount in the range of from about 0.1% to about 15% by weight.
- Claim 166 (Withdrawn):** The fluid loss control additive of claim 136 wherein the fluid loss control additive is present in the cement composition in an amount in the range of from about 0.25% to about 1.5% by weight of the cement; wherein the hydratable polymer is present in the fluid loss control additive in an amount in the range of from about 1.5% to about 4.5% by weight; wherein the acrylamide copolymer derivative is present in the fluid loss control additive in an amount in the range of from about 40% by weight to about 50% by weight; wherein the dispersing agent is present in the fluid loss control additive in an amount in the range of from about in the range of from about 40% to about

60% by weight; wherein the zeolite is present in the fluid loss control additive in an amount in the range of from about 1% by weight to about 10% by weight.

Claim 167 (Withdrawn): A fluid loss control additive comprising: an acrylamide copolymer derivative; and a dispersant.

Claim 168 (Withdrawn): The fluid loss control additive of claim 167 wherein the acrylamide copolymer derivative comprises a copolymer or copolymer salt of N,N-dimethylacrylamide and 2-acrylamido-2-methylpropane sulfonic acid or acid salts thereof.

Claim 169 (Withdrawn): The fluid loss control additive of claim 167 wherein the acrylamide copolymer derivative comprises a graft polymer comprising a backbone comprising at least one member selected from the group consisting of lignin, lignite and their salts and a grafted pendant group comprising at least one member selected from the group consisting of 2-acrylamido-2-methylpropanesulfonic acid, acrylonitrile, N,N-dimethylacrylamide, acrylic acid, N,N-dialkylaminoethylmethacrylate wherein the alkyl radical comprises at least one member selected from the group consisting of methyl, ethyl and propyl radicals.

Claim 170 (Withdrawn): The fluid loss control additive of claim 167 wherein the acrylamide copolymer derivative comprises a graft polymer comprising a backbone comprising at least one member selected from the group consisting of derivatized cellulose, polyvinyl alcohol, polyethylene oxide, polypropylene oxide, and a grafted pendant group comprising at least one member selected from the group consisting of 2-acrylamido-2-methylpropanesulfonic acid, acrylonitrile, N,N-dimethylacrylamide, acrylic acid, N,N-dialkylaminoethylmethacrylate wherein the alkyl radical comprises at least one member selected from the group consisting of methyl, ethyl and propyl radicals.

Claim 171 (Withdrawn): The fluid loss control additive of claim 167 wherein the acrylamide copolymer derivative comprises copolymers or copolymer salts comprising 2-acrylamido-2-methylpropane sulfonic acid or acid salts thereof.

Claim 172 (Withdrawn): The fluid loss control additive of claim 171 wherein the copolymers or copolymer salts comprise copolymers of hydrolyzed acrylamide and 2-acrylamido-2-methylpropane sulfonic acid derivatives.

Claim 173 (Withdrawn): The fluid loss control additive of claim 167 further comprising a hydratable polymer and a zeolite.

Claim 174 (Withdrawn): The fluid loss control additive of claim 167 wherein the dispersant comprises a water-soluble polymer prepared by the caustic-catalyzed condensation of formaldehyde with acetone wherein the polymer contains sodium sulfate groups.

Claim 175 (Cancelled).

Claim 176 (Currently Amended): ~~The method of claim 175, wherein the iron compound comprises~~ A method of reducing the fluid loss from a cement composition, comprising adding to the cement composition a fluid loss control additive comprising an organic compound and iron chloride.

Claim 177 (Currently Amended): ~~The method of claim 175, wherein the iron compound comprises~~ A method of reducing the fluid loss from a cement composition, comprising adding to the cement composition a fluid loss control additive comprising an organic compound and anhydrous ferric chloride.

Claim 178 (Currently Amended): ~~The method of claim 175, wherein the fluid loss control additive further comprises~~ A method of reducing the fluid loss from a cement composition, comprising adding to the cement composition a fluid loss control additive comprising an organic compound, an iron compound, and a zeolite.

Claim 179 (Cancelled).

Claim 180 (Currently Amended): ~~The method of claim 175, wherein the organic compound comprises~~ A method of reducing the fluid loss from a cement composition, comprising adding to the cement composition a fluid loss control additive comprising an iron compound, an acrylamide copolymer derivative and a dispersant.

Claim 181 (Currently Amended): ~~The method of claim 175, wherein the organic compound comprises~~ A method of reducing the fluid loss from a cement composition, comprising adding to the cement composition a fluid loss control additive comprising an iron compound, an acrylamide copolymer derivative and a hydratable polymer.

Claim 182 (Currently Amended): ~~The method of claim 175, wherein the organic compound comprises~~ A method of reducing the fluid loss from a cement composition, comprising adding to the cement composition a fluid loss control additive comprising an iron compound, an acrylamide copolymer derivative, a hydratable polymer, and a dispersant.

Claim 183 (Currently Amended): The method of claim ~~178~~ 175, ~~wherein the fluid loss control additive further comprises a zeolite; and~~ wherein the organic compound comprises an acrylamide copolymer derivative, a hydratable polymer, and a dispersant.

Claim 184 (Cancelled).

Claim 185 (Currently Amended): ~~The method of claim 175, wherein the iron compound comprises iron chloride; and wherein the organic compound comprises~~ A method of reducing the fluid loss from a cement composition, comprising adding to the cement composition a fluid loss control additive comprising iron chloride, an acrylamide copolymer derivative, a hydratable polymer, and a dispersant.

Claim 186 (New): A method of reducing the fluid loss from a cement composition, comprising adding to the cement composition a fluid loss control additive comprising an acrylamide copolymer derivative and iron chloride.

Claim 187 (New): A method of reducing the fluid loss from a cement composition, comprising adding to the cement composition a fluid loss control additive comprising an organic compound and an iron salt.

Claim 188 (New): The method of claim 187, wherein the iron salt comprises iron chloride.

Claim 189 (New): The method of claim 187, wherein the iron salt comprises anhydrous ferric chloride.

Claim 190 (New): The method of claim 187, wherein the fluid loss control additive further comprises a zeolite.

Claim 191 (New): The method of claim 190, wherein the zeolite comprises chabazite and amorphous silica.

Claim 192 (New): The method of claim 187, wherein the organic compound comprises an acrylamide copolymer derivative and a dispersant.

Claim 193 (New): The method of claim 192, wherein the organic compound further comprises a hydratable polymer.

Claim 194 (New): The method of claim 187, wherein the organic compound comprises an acrylamide copolymer derivative and a hydratable polymer.

Claim 195 (New): The method of claim 187, wherein the organic compound comprises an acrylamide copolymer derivative.

- Claim 196 (New):** The method of claim 177, wherein the iron compound comprises iron chloride.
- Claim 197 (New):** The method of claim 178, wherein the iron compound comprises iron chloride.
- Claim 198 (New):** The method of claim 180, wherein the iron compound comprises iron chloride.
- Claim 199 (New):** The method of claim 180, wherein the fluid loss control additive further comprises a zeolite.
- Claim 200 (New):** The method of claim 181, wherein the iron compound comprises iron chloride.
- Claim 201 (New):** The method of claim 181, wherein the fluid loss control additive further comprises a zeolite.
- Claim 202 (New):** The method of claim 182, wherein the iron compound comprises iron chloride.
- Claim 203 (New):** The method of claim 182, wherein the iron compound comprises anhydrous ferric chloride.
- Claim 204 (New):** The method of claim 185 wherein the iron chloride comprises anhydrous ferric chloride.
- Claim 205 (New):** The method of claim 176 wherein the organic compound comprises a copolymer or copolymer salt of N,N-dimethylacrylamide and 2-acrylamido-2-methylpropane sulfonic acid or acid salts thereof.
- Claim 206 (New):** The method of claim 176 wherein the organic compound comprises copolymers or copolymer salts comprising 2-acrylamido-2-methylpropane sulfonic acid or acid salts thereof.
- Claim 207 (New):** The method of claim 39 wherein the dispersant comprises a water-soluble polymer prepared by the caustic-catalyzed condensation of formaldehyde with acetone wherein the polymer contains sodium sulfate groups.
- Claim 208 (New):** The method of claim 45 wherein the dispersant comprises a water-soluble polymer prepared by the caustic-catalyzed condensation of formaldehyde with acetone wherein the polymer contains sodium sulfate groups.

- Claim 209 (New):** The method of claim 56 wherein the dispersant comprises a water-soluble polymer prepared by the caustic-catalyzed condensation of formaldehyde with acetone wherein the polymer contains sodium sulfate groups.
- Claim 210 (New):** The method of claim 84 wherein the dispersant comprises a water-soluble polymer prepared by the caustic-catalyzed condensation of formaldehyde with acetone wherein the polymer contains sodium sulfate groups.
- Claim 207 (New):** The method of claim 90 wherein the dispersant comprises a water-soluble polymer prepared by the caustic-catalyzed condensation of formaldehyde with acetone wherein the polymer contains sodium sulfate groups.
- Claim 208 (New):** The method of claim 180 wherein the dispersant comprises a water-soluble polymer prepared by the caustic-catalyzed condensation of formaldehyde with acetone wherein the polymer contains sodium sulfate groups.
- Claim 209 (New):** The method of claim 182 wherein the dispersant comprises a water-soluble polymer prepared by the caustic-catalyzed condensation of formaldehyde with acetone wherein the polymer contains sodium sulfate groups.
- Claim 210 (New):** The method of claim 183 wherein the dispersant comprises a water-soluble polymer prepared by the caustic-catalyzed condensation of formaldehyde with acetone wherein the polymer contains sodium sulfate groups.
- Claim 211 (New):** The method of claim 185 wherein the dispersant comprises a water-soluble polymer prepared by the caustic-catalyzed condensation of formaldehyde with acetone wherein the polymer contains sodium sulfate groups.
- Claim 212 (New):** The method of claim 192 wherein the dispersant comprises a water-soluble polymer prepared by the caustic-catalyzed condensation of formaldehyde with acetone wherein the polymer contains sodium sulfate groups.